

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Peter Bauer et al
Application Number: 10/567,960
Filing Date: 09/11/2006
Group Art Unit: 3744
Examiner: Lakiya G. Rogers
Title: TWO-PART COOLING DEVICE

Mail Stop Appeal Brief - Patents

Commissioner for Patents

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APPEAL BRIEF

Pursuant to 37 CFR 1.192, Appellants hereby file an appeal brief in the above-identified application. This Appeal Brief is accompanied by the requisite fee set forth in 37 CFR 1.17(f).

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(1) REAL PARTY IN INTEREST

The real party in interest is BSH Bosch und Siemens Hausgeräte GmbH.

(2) RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) STATUS OF CLAIMS

Claims 12-22 are pending in the present application. Claims 1-11 were canceled. The final rejections of claims 12-22 are being appealed. Claims 12, 20, and 22 are independent.

(4) STATUS OF AMENDMENTS

There are no outstanding Amendments.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

In many conventional refrigerating appliances, with the exception of the evaporator, substantially all the components of the cooling circuit are accommodated in a base unit mounted fixedly below the housing. In this manner, a very favorable ratio of volume to surface area of housing can thereby be achieved, resulting in a low requirement for cooling capacity. However, in the conventional designs, forced ventilation commonly is required because convection can no longer be used for removing the waste heat from such a base unit.

In addition, the base unit takes up space in the fitting recess, thereby reducing an amount of storage space for other purposes.

In stark contrast, the present invention eliminates the conventional fixed connection between the heat-insulating housing on the one hand and the base unit on the other hand such that it is possible to accommodate both these units spatially separated from one another in largely arbitrary positions in relation to one another in furniture such as a kitchen cupboard. A readily accessible zone of the furniture can be selected for accommodating the first structural unit including the housing. The second structural unit including the compressor can be placed in a poorly accessible zone, such as the base area present in most kitchen furniture that is immediately adjacent to the floor, which is not very attractive for any other usage or in any case, would not be usable at all. In this manner, the present invention uses space which commonly is unused as a so-called machine compartment, thereby increasing storage space either for the refrigerating appliance or the built-in cupboard holding the refrigerating appliance. See, e.g., page 1, lines 13-19 and 31-32; page 2, lines 1-10.

An exemplary embodiment of the present invention, as recited by, for example, independent claim 12, is directed to a refrigerating appliance, comprising a heat-insulating housing 4, 5 (see, e.g., page 3, lines 25-26; Figure 1); a cooling circuit including an evaporator 7 (see, e.g., page 3, line 28; page 4, lines 1-12), a compressor 20 (see, e.g., page 4, 20-28) and a condenser 24 (see, e.g., page 4, lines 23-24); a first assembly 3 including at least said housing 5 and said evaporator 7 (see, e.g., page 3, lines 25-32; page 4, lines 14-15); a second assembly 19 mounted remotely from said first assembly 3 and separated therefrom by a spacing zone, said second assembly 19 including at least said compressor 24 (see, e.g., page 4, lines 20-24); and a coupling assembly 23 extending across said spacing zone between the first assembly 3 and the second assembly 19 for movement of refrigerant therethrough (see, e.g., page 4, lines 26-31; and page 5, lines 5-10).

As explained above, the present invention provides the flexibility in refrigerator construction to allow the refrigerated compartment to be placed at a height convenient for use

in a first zone in operational communication with a second assembly formed as a base unit and disposed in a second zone remotely from the first assembly, usually in a poorly accessible area which may otherwise be unusable for kitchen service. See, e.g., page 2, lines 3-10.

Another exemplary embodiment of the present invention, as recited by, for example, independent claim 20, is directed to an assembly for a refrigerating appliance, comprising a heat-insulating housing 5 (see, e.g., page 3, lines 25-26; Figure 1); an evaporator 7 (see, e.g., page 3, line 28; page 4, lines 1-12); and at least one coupling portion 23 from which at least one of an inlet or drain pipe for a coolant extends to said evaporator 7 (see, e.g., page 4, lines 26-31; and page 5, lines 5-10).

Yet another exemplary embodiment of the present invention, as recited by, for example, independent claim 22, is directed to a method for installing a refrigerating appliance in furniture, comprising the following steps:

- a. installing a first assembly 3 of the refrigerating appliance, including at least one heat-insulating housing 5, an evaporator 7 and a coolant pipe 8, 9, in a first zone of the furniture (see, e.g., page 5, lines 1-4);
- b. installing a second assembly 19 including at least one compressor 24 in a second zone of said furniture said first zone being separated from said second zone by a third zone, with the third zone being devoid of said first assembly 3 and said second assembly 19 (see, e.g., page 5, lines 4-5; and
- c. connecting connections of said coolant pipe 8, 9 of said first assembly 3 to corresponding connections of said second assembly 19, with said coolant pipe 8, 9 spanning the distance between the first assembly 3 and the second assembly 19 (see, e.g., page 5, lines 5-10).

As explained above, the present invention provides the flexibility in refrigerator construction to allow the refrigerated compartment to be placed at a height convenient for use in a first zone in operational communication with a second assembly formed as a base unit

and disposed in a second zone remotely from the first assembly, usually in a poorly accessible area which may otherwise be unusable for kitchen service. See, e.g., page 2, lines 3-10.

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- a. Whether claims 12-14, 16, and 20-21 are anticipated under 35 U.S.C. 102(b) by the Simmons et al. reference (W003/012350).
- b. Whether claim 15 is unpatentable under 35 U.S.C. § 103(a) over the Simmons et al. reference (W003/012350) in view of the Fumagalli reference (EP0845643).
- c. Whether claim 17 is unpatentable under 35 U.S.C. 103(a) over the Simmons et al. reference (W003/012350) in view of the Kahler reference (US 6745588).
- d. Whether claims 18, 19, and 22 are unpatentable under 35 U.S.C. 103(a) over the Simmons et al. reference (W003/012350) in view of the Holzer et al. reference (US2002/0014086).

(7) ARGUMENT

- a. Claims 12-14, 16, and 20-21 are not anticipated under 35 U.S.C. 102(b) by the Simmons et al. reference (W003/012350).

In the final Office Action, claims 12-14, 16, and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by the Simmons et al. reference. Appellants respectfully traverse this rejection.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. [...] The identical invention must be shown in as complete detail as is contained in the ... claim." M.P.E.P. § 2131.

Appellants respectfully submit that the Simmons et al. reference does not disclose the features of the claimed invention including a heat-insulating housing; a cooling circuit including an evaporator, a compressor and a condenser; a first assembly including at least said housing and said evaporator; a second assembly mounted remotely from said first assembly and separated therefrom by a spacing zone, said second assembly including at least said compressor; and a coupling assembly extending across said spacing zone between the first assembly and the second assembly for movement of refrigerant therethrough, as recited in independent claim 12.

As explained above, these features are important providing the flexibility in refrigerator construction to allow the refrigerated compartment to be placed at a height convenient for use in a first zone in operational communication with a second assembly formed as a base unit and disposed in a second zone remotely from the first assembly, usually in a poorly accessible area which may otherwise be unusable for kitchen service. See, e.g., page 2, lines 3-10.

The Simmons et al. reference very clearly does not disclose these features. Indeed, the Simmons et al. reference very clearly fails to disclose at least a first assembly including at least said housing and said evaporator; a second assembly mounted remotely from said first assembly and separated therefrom by a spacing zone, said second assembly including at least said compressor; and a coupling assembly extending across said spacing zone between the first assembly and the second assembly for movement of refrigerant therethrough, as recited in independent claim 12.

The claimed invention clearly recites (1) that the housing is included in the first assembly, and (2) that the first assembly, which includes the housing, is mounted remotely from the second assembly.

In stark contrast, the Simmons et al. reference discloses an insulated frame 130 that includes both the alleged first assembly 150 and the alleged second assembly 140. Since the first assembly 150 and the alleged second assembly 140 are part of the insulated frame 130, the second assembly 140 very clearly is not, and cannot be, remote from the first assembly 150, which includes the insulated frame 130.

Indeed, the Simmons et al. reference appears to be comparable to the second conventional design described by Appellants in the present application. See, e.g., page 1, lines 13-19.

The Simmons et al. reference very clearly does not disclose the features of the claimed invention including a heat-insulating housing; a cooling circuit including an evaporator, a compressor and a condenser; a first assembly including at least said housing and said evaporator; a second assembly mounted remotely from said first assembly and separated therefrom by a spacing zone, said second assembly including at least said compressor; and a coupling assembly extending across said spacing zone between the first assembly and the second assembly for movement of refrigerant therethrough, as recited in independent claim 12.

As explained above, these features are important providing the flexibility in refrigerator construction to allow the refrigerated compartment to be placed at a height convenient for use in a first zone in operational communication with a second assembly formed as a base unit and disposed in a second zone remotely from the first assembly, usually in a poorly accessible area which may otherwise be unusable for kitchen service. See, e.g., page 2, lines 3-10.

Appellants respectfully requests reversal of this rejection.

- b. Claim 15 is not unpatentable under 35 U.S.C. § 103(a) over the Simmons et al. reference (W003/012350) in view of the Fumagalli reference (EP0845643).

In the Office Action, claim 15 is rejected under 35 U.S.C. § 103(a) as being anticipated by the Simmons et al. reference in view of the Fumagalli reference. Appellants respectfully traverse this rejection.

Appellants respectfully submit that none of the applied references discloses or suggests the features of the claimed invention including a heat-insulating housing; a cooling circuit including an evaporator, a compressor and a condenser; a first assembly including at least said housing and said evaporator; a second assembly mounted remotely from said first assembly and separated therefrom by a spacing zone, said second assembly including at least said compressor; and a coupling assembly extending across said spacing zone between the first assembly and the second assembly for movement of refrigerant therethrough, as recited in independent claim 12.

As explained above, these features are important providing the flexibility in refrigerator construction to allow the refrigerated compartment to be placed at a height convenient for use in a first zone in operational communication with a second assembly formed as a base unit and disposed in a second zone remotely from the first assembly, usually in a poorly accessible area which may otherwise be unusable for kitchen service. See, e.g., page 2, lines 3-10.

As explained above, the Simmons et al. reference very clearly does not teach or suggest these features.

The Fumagalli reference does not remedy the deficiencies of the Simmons et al. reference. Indeed, the Office Action does not rely on the Fumagalli reference for these features.

As shown in Figures 1-3, the Fumagalli reference clearly fails to disclose or suggest at least a first assembly including at least said housing and said evaporator; a second assembly mounted remotely from said first assembly and separated therefrom by a spacing zone, said second assembly including at least said compressor; and a coupling assembly extending across said spacing zone between the first assembly and the second assembly for movement of refrigerant therethrough, as recited in independent claim 12.

For at least these reasons, Appellants respectfully submit that none of the applied references discloses or suggests the features of the claimed invention including a heat-insulating housing; a cooling circuit including an evaporator, a compressor and a condenser; a first assembly including at least said housing and said evaporator; a second assembly mounted remotely from said first assembly and separated therefrom by a spacing zone, said second assembly including at least said compressor; and a coupling assembly extending across said spacing zone between the first assembly and the second assembly for movement of refrigerant therethrough, as recited in independent claim 12.

As explained above, these features are important providing the flexibility in refrigerator construction to allow the refrigerated compartment to be placed at a height convenient for use in a first zone in operational communication with a second assembly formed as a base unit and disposed in a second zone remotely from the first assembly, usually in a poorly accessible area which may otherwise be unusable for kitchen service. See, e.g., page 2, lines 3-10.

Appellants respectfully request reversal of this rejection.

- c. Claim 17 is not unpatentable under 35 U.S.C. 103(a) over the Simmons et al. reference (W003/012350) in view of the Kahler reference (US 6745588).

In the Office Action, claim 17 is rejected under 35 U.S.C. 103(a) as being anticipated by the Simmons et al. reference in view of the Kahler reference. Appellants respectfully traverse this rejection.

Appellants respectfully submit that none of the applied references discloses or suggests the features of the claimed invention including a heat-insulating housing; a cooling circuit including an evaporator, a compressor and a condenser; a first assembly including at least said housing and said evaporator; a second assembly mounted remotely from said first assembly and separated therefrom by a spacing zone, said second assembly including at least said compressor; and a coupling assembly extending across said spacing zone between the first assembly and the second assembly for movement of refrigerant therethrough, as recited in independent claim 12.

As explained above, these features are important providing the flexibility in refrigerator construction to allow the refrigerated compartment to be placed at a height convenient for use in a first zone in operational communication with a second assembly formed as a base unit and disposed in a second zone remotely from the first assembly, usually in a poorly accessible area which may otherwise be unusable for kitchen service. See, e.g., page 2, lines 3-10.

As explained above, the Simmons et al. reference very clearly does not teach or suggest these features.

The Kahler reference does not remedy the deficiencies of the Simmons et al. reference.

"[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rationale

underpinning to support the legal conclusion of obviousness." (In re Kahn, 441 F.3d 977, 988 (CA Fed. 2006) cited with approval in KSR).

Appellants respectfully submit that one of ordinary skill in the art would not have had an apparent reason to combine the disclosure of the Simmons et al. reference with the disclosure of the Kahler reference to arrive at the claimed invention as a whole. Moreover, the Office Action does not establish an adequate rationale for making such a combination.

Instead, regarding the Kahler reference, the Office Action makes the conclusory statement that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Simmons et al reference with the Kahler reference to include the coolant pipe together with a condensation water pipe guided in a line and including a coupling disposed in the condensation water pipe for convenient adjusting of the piping relative to the location of the modular refrigerator housing in view of the teaching by Kahler. The Office Action fails to provide any support for these conclusions.

Appellants respectfully submit that such conclusory statements are insufficient to provide a prima facie case for obviousness because the Office Action fails to provide an adequate rationale for modifying the prior art as required by KSR International v. Teleflex Inc. 82 U.S.P.Q. 2d 1385 (2007).

The Office Action provides absolutely no hint of any articulated reasoning with any rationale underpinning to support a legal conclusion of obviousness. As such, the Office Action fails to present a prima facie case for obviousness.

The Office Action has provided no articulated reasoning to modify the Simmons et al reference to arrive at the claimed invention, except from using Appellants' invention as a template through hindsight reconstruction of Appellants' claims.

For at least these reasons, Appellants respectfully submit that none of the applied references discloses or suggests the features of the claimed invention including a heat-insulating housing; a cooling circuit including an evaporator, a compressor and a condenser; a first assembly including at least said housing and said evaporator; a second assembly mounted

remotely from said first assembly and separated therefrom by a spacing zone, said second assembly including at least said compressor; and a coupling assembly extending across said spacing zone between the first assembly and the second assembly for movement of refrigerant therethrough, as recited in independent claim 12.

As explained above, these features are important providing the flexibility in refrigerator construction to allow the refrigerated compartment to be placed at a height convenient for use in a first zone in operational communication with a second assembly formed as a base unit and disposed in a second zone remotely from the first assembly, usually in a poorly accessible area which may otherwise be unusable for kitchen service. See, e.g., page 2, lines 3-10.

Appellants respectfully request reversal of this rejection.

- d. Claims 18, 19, and 22 are not unpatentable under 35 U.S.C. 103(a) over the Simmons et al. reference (W003/012350) in view of the Holzer et al. reference (US2002/0014086).

In the Office Action, claims 18, 19, and 22 are rejected under 35 U.S.C. 103(a) as being anticipated by the Simmons et al. reference in view of the Holzer et al. reference. Appellants respectfully traverse this rejection.

Appellants respectfully submit that none of the applied references discloses or suggests the features of the claimed invention including a heat-insulating housing; a cooling circuit including an evaporator, a compressor and a condenser; a first assembly including at least said housing and said evaporator; a second assembly mounted remotely from said first assembly and separated therefrom by a spacing zone, said second assembly including at least said compressor; and a coupling assembly extending across said spacing zone between the first assembly and the second assembly for movement of refrigerant therethrough, as recited in independent claim 12.

As explained above, these features are important providing the flexibility in refrigerator construction to allow the refrigerated compartment to be placed at a height convenient for use in a first zone in operational communication with a second assembly formed as a base unit and disposed in a second zone remotely from the first assembly, usually in a poorly accessible area which may otherwise be unusable for kitchen service. See, e.g., page 2, lines 3-10.

As explained above, the Simmons et al. reference very clearly does not teach or suggest these features. The Holzer reference does not remedy the deficiencies of the Simmons et al. reference.

The Holzer reference discloses a cooling device for installation in a furniture niche. The cooling device is seen in Figure 1 and illustrated at 25 with a cooling unit 28 disposed immediately therebelow. Figure 1 discloses a kitchen furniture unit 10 having three adjacent cabinets 11 a, 11 b and 11 c, whose front is formed by doors 12 that are constructed at different heights and on whose body rests on height adjustable feet 13 that stand on the non-illustrated floor of a kitchen. (Paragraph 0020). A center cabinet supports the built-in cooling device 25. The cooling machinery is disposed in the base 28. (Paragraph 0021). The refrigeration unit or cooling device 25 is essentially a conventional small refrigerator disposed within a lower cabinet of the kitchen unit 10.

In stark contrast to the present invention, the cooling chamber of Holzer reference is not remotely disposed from the cooling machinery and a first assembly is not remotely disposed from a second assembly and separated therefrom by a spacing zone in accordance with the claims of the present application with the separation occurring across a spacing zone within the kitchen furniture.

For at least these reasons, Appellants respectfully submit that none of the applied references discloses or suggests the features of the claimed invention including a heat-insulating housing; a cooling circuit including an evaporator, a compressor and a condenser; a first assembly including at least said housing and said evaporator; a second assembly mounted

remotely from said first assembly and separated therefrom by a spacing zone, said second assembly including at least said compressor; and a coupling assembly extending across said spacing zone between the first assembly and the second assembly for movement of refrigerant therethrough, as recited in independent claim 12.

As explained above, these features are important providing the flexibility in refrigerator construction to allow the refrigerated compartment to be placed at a height convenient for use in a first zone in operational communication with a second assembly formed as a base unit and disposed in a second zone remotely from the first assembly, usually in a poorly accessible area which may otherwise be unusable for kitchen service. See, e.g., page 2, lines 3-10.

Appellants respectfully request reversal of this rejection.

(8) CONCLUSION

In view of the foregoing discussion, Appellants respectfully request reversal of the Examiner's rejections.

Respectfully submitted,

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CLAIMS APPENDIX

1 – 11 (Canceled)

12. (Rejected) A refrigerating appliance, comprising:
 - a heat-insulating housing;
 - a cooling circuit including an evaporator, a compressor and a condenser;
 - a first assembly including at least said housing and said evaporator;
 - a second assembly mounted remotely from said first assembly and separated therefrom by a spacing zone, said second assembly including at least said compressor;
 - and
 - a coupling assembly extending across said spacing zone between the first assembly and the second assembly for movement of refrigerant therethrough.
13. (Rejected) The refrigerating appliance according to claim 12, including a coupling disposed in a coolant pipe connecting said first assembly and said second assembly.
14. (Rejected) The refrigerating appliance according to claim 13, including said coupling including a first coupling portion attached to said first assembly and a second coupling portion attached to said second assembly, said two coupling portions are self-closing in an uncoupled state allowing said first assembly and said second assembly to be detachably separable from one another for remote mounting of said first assembly and said second assembly separated by said spacing zone.
15. (Rejected) The refrigerating appliance according to claim 12, including said second assembly provided with forced ventilation.

16. (Rejected) The refrigerating appliance according to claim 12, including said condenser being part of said second assembly.
17. (Rejected) The refrigerating appliance according to claim 13, including said coolant pipe together with a condensation water pipe is guided in a line and including a coupling disposed in said condensation water pipe.
18. (Rejected) The refrigerating appliance according to claim 12, wherein the refrigerating appliance includes a kitchen furniture arrangement including a base zone and wherein said second assembly is accommodated in said base zone.
19. (Rejected) The refrigerating appliance according to claim 18, including said kitchen furniture arrangement including at least one compartment, said first assembly and said second assembly being separated by said at least one compartment of said kitchen furniture arrangement.
20. (Rejected) An assembly for a refrigerating appliance, comprising:
a heat-insulating housing;
an evaporator; and
at least one coupling portion from which at least one of an inlet or drain pipe for a coolant extends to said evaporator.
21. (Rejected) An assembly for a refrigerating appliance, comprising
a compressor and at least one of a suction or pressure pipe for a coolant, said suction pipe and said pressure pipe each extend between said compressor and a coupling portion.

22. (Rejected) A method for installing a refrigerating appliance in furniture, comprising the following steps:
- a. installing a first assembly of the refrigerating appliance, including at least one heat-insulating housing, an evaporator and a coolant pipe, in a first zone of the furniture;
 - b. installing a second assembly including at least one compressor in a second zone of said furniture said first zone being separated from said second zone by a third zone, with the third zone being devoid of said first assembly and said second assembly; and
 - c. connecting connections of said coolant pipe of said first assembly to corresponding connections of said second assembly, with said coolant pipe spanning the distance between the first assembly and the second assembly.

EVIDENCE APPENDIX

None

ATTORNEY DOCKET NO.: 2003P01107WOUS

RELATED APPEALS APPENDIX

None